Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (previously presented): A process of forming a diffusion coating on a component, the process comprising the steps of:

mixing a particulate donor material containing a coating element, an activator dissolved in a solvent, and a particulate filler to form an adhesive mixture having a formable, malleable consistency, wherein the adhesive mixture does not contain an extraneous binder and the donor material and the filler within the adhesive mixture are cohered solely by the dissolved activator;

applying the adhesive mixture to a surface of the component; and

heating the component to a temperature sufficient to vaporize and react the activator with the coating element of the donor material to form a reactive vapor of the coating element, the reactive vapor reacting at the surface of the component to form a diffusion coating containing the coating element.

Claim 2 (original): A process according to claim 1, further comprising

the step of drying the adhesive mixture after the applying step to remove the solvent from the adhesive mixture and thereby form a solid pack adhering to the surface of the component.

Claim 3 (original): A process according to claim 1, wherein the donor material comprises an aluminum alloy.

Claim 4 (original): A process according to claim 1, wherein the coating element is aluminum and the diffusion coating is a diffusion aluminide coating.

Claim 5 (original): A process according to claim 1, wherein the activator is chosen from the group consisting of NH_4Cl, NH_4Br, NH_4I, NH_4F, and NH_4HF_2.

Claim 6 (original): A process according to claim 1, wherein the solvent is water.

Claim 7 (original): A process according to claim 1, wherein the particulate filler comprises an alumina powder.

Claim 8 (canceled)

Claim 9 (original): A process according to claim 1, wherein the component is a gas turbine engine component formed of a superalloy.

Claim 10 (original): A process according to claim 1, wherein the surface of the component is a repaired surface region that constitutes a limited surface portion of the component.

Claim 11 (original): A process according to claim 1, wherein the component is a new-make component and the surface of the component constitutes a limited surface portion of the component.

Claim 12 (original): A process according to claim 1, wherein the adhesive mixture does not have a uniform thickness following the applying step.

Claim 13 (original): A process for forming a diffusion aluminide coating on a superalloy component of a gas turbine engine, the process comprising the steps of:

dissolving at least one ammonium halide activator in water to form an

ammonium halide-containing solution;

mixing a particulate donor material containing aluminum and a particulate filler to form a powder mixture;

mixing the powder mixture and the ammonium halide-containing solution to form an adhesive mixture having a formable, malleable consistency, the donor material and the filler within the adhesive mixture being cohered solely by the at least one dissolved activator;

applying the adhesive mixture to a surface of the component;

drying the adhesive mixture to evaporate the water from the adhesive mixture and thereby form a solid pack that adheres to the surface of the component, the at least one ammonium halide activator binding the donor material and the filler together within the solid pack; and then

heating the component in an inert or reducing atmosphere to a temperature that is held for a duration sufficient to vaporize and react the at last one ammonium halide activator with the aluminum of the donor material to form an aluminum halide vapor, the aluminum halide vapor reacting at the surface of the component to form a diffusion aluminide coating.

Claim 14 (original): A process according to claim 13, wherein the donor material comprises an aluminum alloy chosen from the group consisting

of CrAl, CoAl, FeAl, and TiAl alloys.

Claim 15 (original): A process according to claim 13, wherein the at least one ammonium halide activator is chosen from the group consisting of NH_4Cl, NH_4Br, NH_4I, NH_4F, and NH_4HF_2.

Claim 16 (original): A process according to claim 13, wherein the adhesive mixture is prepared to further contain a metal halide activator.

Claim 17 (original): A process according to claim 13, wherein the adhesive mixture is prepared to further contain clay.

Claim 18 (original): A process according to claim 13, wherein the heating step is performed at a temperature of about 800°C to about 1150°C.

Claim 19 (original): A process according to claim 13, wherein the surface of the component constitutes a limited surface portion of the component.

Claim 20 (original): A process according to claim 13, wherein the

adhesive mixture does not have a uniform thickness following the applying step.

Claim 21 (currently amended): A process of forming a diffusion coating on a component, the process comprising the steps of:

dissolving an activator in a solvent to form an activator solution;

mixing a particulate filler and a particulate donor material containing a coating element with the activator solution to form an adhesive mixture having a formable, malleable consistency, wherein the adhesive mixture does not contain an extraneous binder, and the donor material and the filler within the adhesive mixture are cohered solely by the dissolved activator;

applying the adhesive mixture to a surface of the component; and

heating the component to a temperature sufficient to vaporize and react the activator with the coating element of the donor material to form a reactive vapor of the coating element, the reactive vapor reacting at the surface of the component to form a diffusion coating containing the coating element.

Claim 22 (previously presented): A process according to claim 21, further comprising the step of drying the adhesive mixture after the applying step to remove the solvent from the adhesive mixture and thereby form a solid pack adhering to the surface of the component.

Claim 23 (previously presented): A process according to claim 21, wherein the donor material comprises an aluminum alloy.

Claim 24 (previously presented): A process according to claim 21, wherein the coating element is aluminum and the diffusion coating is a diffusion aluminide coating.

Claim 25 (previously presented): A process according to claim 21, wherein the activator is chosen from the group consisting of NH_4Cl, NH_4Br, NH_4I, NH_4F, and NH_4HF_2.

Claim 26 (previously presented): A process according to claim 21, wherein the solvent is water.

Claim 27 (canceled):

Claim 28 (previously presented): A process according to claim 21, wherein the component is a gas turbine engine component formed of a superalloy.

Claim 29 (previously presented): A process according to claim 21, wherein the surface of the component is a repaired surface region that constitutes a limited surface portion of the component.

Claim 30 (previously presented): A process according to claim 21, wherein the component is a new-make component and the surface of the component constitutes a limited surface portion of the component.